DOCUMENT RESUME

ED 299 237 SP 030 613

AUTHOR Vratanina, Georgia M.
TITLE The Effects of Homework on Learning.
PUB DATE Apr 88
NOTE 43p.; Exit Paper, Indiana University at South Bend.
PUB TYPE Reference Materials - Bibliographies (131) -- Dissertations/Theses - Undetermined (040) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Elementary Secondary Education; *Homework; *Parent Participation; *Parent School Relationship; *Student Attitudes; Student Motivation; Television Viewing

ABSTRACT

A review of research on homework is presented in the form of an annotated bibliography. The first part of the study deals with the historical development of homework in the late 19th and 20th centuries. In the second section, the nature and purposes of homework are explained as well as how assignments should be used to be more effective. The third part deals with time spent on homework and the effects of homework on learning. The last part examines the home-school partnership and its relationship with homework. Conclusions are discussed and some recommendations are made. A bibliography is appended. (JD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED299237

THE EFFECTS OF HOMEWORK ON LEARNING

BY

GEORGIA M. VRATANINA

Graduate Student

A Study Directed

by

Charles R. DuVall, Ph.D.

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

G. M. Vratanina

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

SP030613

Submitted in partial fulfillment of the requirements
for the course E591--Exit Project
Indiana University at South Bend
April, 1988

BEST COPY AVAILABLE

INTRODUCTION

The National Commission on Excellence in their 1983 report were quite critical of the homework practices in U.S. high schools. This criticism stemmed from the fact that American students were devoting considerably less time and effort to homework, than students in other countries (Walberg et al.) or students from previous generations. The statistics showed that American high school students reported doing three hours or less of homework per week, whereas 46 percent reported spending three hours or more per weekday watching television (Keith et al., 1986). By reducing leisure television watching, there seemed to be ample time for high school students to complete homework if it was assigned and taken seriously. Thus, as an educational reform, the Commission recommended that homework requirements be increased as a means of improving academic achievement.

This isn't the first time that school reform has attempted to improve academic conditions by increasing homework requirements. Historically, when grades or test scores dropped, the pressure to increase homework surfaced. However, parents and educators weren't always in agreement with these changes (Ladies' Home Journal, 1913). Homework is a controversial issue and since the turn of the century, it has sparked a great amount of debate. It has generated a full range of positive and negative positions, and positive and negative research (Friesen, 1979). On the one hand, most teachers and parents are in favor of increased homework and believe homework to be of value (Gallup, 1985; Langdon and Stout,1963). On the other hand, they are confused about the ways homework assignments benefit or detract from learning (Garman, 1986).

TABLE OF CONTENTS

	Page
INTRODUCTION	1
Statement of the Problem	2
Purpose of the Study	2
Organization of the Study	2
Limitations of the Study	3
Glossary	4
ANNOTATIONS	6
Historical Development of Homework	6
Problems with Research Studies	6
Trends in Attitudes Toward Homework	8
The Nature and Purposes of Homework	10
Defining Homework	10
Kinds of Homework	11
Reasons For and Against Homework	12
Planning, Assigning, and Evaluating Homework	13
The Effectiveness of Homework	17
Time Spent on Homework	17
Effects of Homework on Achievement	19
The Home-School Relationship with Homework	21
Parent Involvement	21
Parents' and Students' Attitudes Toward Homework	22
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	24
Summary	24
Conclusion	32
Recommendations	34
BIBLIOGRAPHY	36
STUDENT QUALIFICATIONS	40

STATEMENT OF THE PROBLEM

It is important for teachers to have some sense of the literature on homework because too many teachers routinely assign homework without any knowledge or understanding of the nature and purposes of homework. Before any guidelines can be developed, teachers need to understand why homework is assigned, whether it is appropriate in quantity and quality, and how to plan, assign, and evaluate it. They need to understand what type of assignments increase achievement. They should consider the importance of the home-school relationship involving homework assignments. Studying research on these issues may help the classroom teacher make homework assignments more effective.

PURPOSE OF THE STUDY

The purpose of this study was to review research on homework and assess its importance to determine whether students profited academically from doing the assignments, and whether these homework assignments increased achievement.

ORGANIZATION OF THE STUDY

The first part of the study dealt with the historical development of homework in the late 19th and 20th century, as it occurred in the United States. It included the positive and negative research about homework to show how controversial the topic was. The second section explained the nature and purposes of homework and how assignments should be used to be more effective. The third part dealt with time spent on homework and the effects of homework on learning. The last portion explained the home-school partnership and its relationship with homework.

LIMITATIONS OF THE STUDY

The purpose of this paper was to review empirical research on homework, however, the number of well-executed research studies were limited (Rickards). For that reason, many of studies used were based on quantitative synthesis of available research. Researchers Walberg (1985) and Paschal et al. (1984) did computer searches of databases and analyzed the results.

Another type of research used were surveys (Epstein, 1986). These surveys were based on questionnaires and polls. Very few of these surveys involved direct observation in the classroom and in the home. There was a need for researchers to go directly into the classroom to observe the manner in which teachers actually go about structuring and sequencing homework assignments. Also, more direct observation should be made of the physical condition under which homework was carried out in the home (Coulter, 1979).

Studies varied as to what grade level there should be increased homework. Friesen (1978) found that administrators approved of more homework above the fourth grade, but for the primary grades it was inappropriate and ineffective. This should have been pursued further, however time limitations restricted an investigation of all the related data.

GLOSSARY

academic achievement - "knowledge attained or skills developed in the school subjects, usually designated by test scores or by marks assigned by teacher, or by both." (Good, p.7)

drill- "a teaching technique intended to bring about automatic accuracy and speed of performance in any subject." (Good, p.196)

emprirical - " in general, derived from or based on experience observation." (Good, p.210)

experimental research - "research study in which experimentation is the principal method involved." (Good, p.494)

guided study - "any study procedure in which the pupil's learning efforts are guided toward the desired objectives rather left to chance; may involve teacher supervision assistance." (Good, p.564)

home-school relations -"relationships between the school and the staff members and the parents of the children in the school with particular regard to the ways in which the school staff and parents work together in helping pupils to derive maximum benefit from their educational experiences." (Good, p.285)

home study - "any study done at home outside school hours; includes work on school assignments, community projects, and strictly individual problems." (Good, p.285)

homework - "school assignments to be completed out of regular school hours at the residence of the pupil." (Good, p.285)

independent study - "educational activity carried on by an individual seeking self-improvement usually but not always self-initiated." (Good, p.565)

individualized study - "study activities that are differentiated to meet the needs of the student instead of being the same for all those in a study group." (Good, p.565)

qualitative - "distinguished by differences in attributes rather than by numerical differences; differing in kind rather than in amount." (Good, p.464)

quantitative - "concerned with measurement." (Good, p.464)

rote-learning - "acquiring the ability to reproduce meaningless materials such as digits or nonsense syllables; learning by memorizing." (Good, p.334)

semi-oblique pattern - " a homework method of studying a topic before the work of the previous topic had been concluded. No direct effort is made to provide reinforcement of previous topic." (Peterson, 1971: p.595)

socio-economic - "the level indicative of both the social and the economic position of an individual or group." (Good, p.597) "indexed by parental income, education, and occupation." (Paschal, Weinstein, and Walberg, 1984: p. 97)

supervised study - "a procedure in which the teacher is available to answer question and offer suggestion, as contrasted with the practice of requiring independent study by students without aid from the teacher." (Good, p.566)

survey - "an investigation of a field to discover current practice trends, and/or norms; may or may not include recommendations based on data gathered." (Good, p.576)

survey, public opinion - " a study of public sentiment carried out over a given area, usually with respect to a current question or problem of importance." (Good, p.577)

synthesis - "a putting together, after comparison and evaluation of several set of findings or points of view to evolve a general point of view embracing what appear to be the sound elements of several sets." (Good, p.579)

ANNOTATIONS

HISTORICAL DEVELOPMENTS OF HOMEWORK

PROBLEMS WITH RESEARCH STUDIES

Rickards, John P. "Homework," Encyclopedia of Educational Research 5th ed., The MacMillan Company: New York, 2 (1982): 831-834.

Rickards in his review on homework, stated that there were three types of articles dealing with homework: two types based on research and one type based on personal opinions. He explained that most of the research papers were of the questionnaire or survey type; however, there had only been a few well-designed experimental research studies in which students had been randomly assigned to an experimental group (such as a homework group) and a control group (such as a no-homework group). Rickards stated that more well-executed experimental research was needed to determine what conditions positively determine academic achievement.

Goldstein, Avery. "Does Homework Help? A Review of Research." The Elementary School Journal 60 (1960):212-214.

Goldstein completed one of the first thorough investigations of experimental research on homework. He examined all the articles on homework listed in the Education Index during the 30 years prior to December 1958. From the 280 articles only 17 were original reports of experimental research: four produced findings that indicated a positive relationship between homework and achievement, four found no relationship, and nine yielded mixed results. He concluded that the best designed experiments showed that homework contributed to academic achievement.

DiNapoli, P. J. "Homework in the New York City Elementary Schools " Bureau of Publications Teachers College, Columbia University, New York, 1937.

DiNapoli conducted a carefully executed study in six New York elementary schools to examine the effects of compulsory homework on students. Comparisons were made between two groups of students. In one group homework was compulsory, and in the other group it was voluntary. The findings showed that the fifth graders achieved slightly better with compulsory homework while the reverse was true for the seventh graders. Although DiNapoli's findings supported the case for regularly assigned homework, he recommended the abolition of compulsory homework in favor of voluntary homework.

Goldstein (1960) who analyzed DiNapoli's study, believed that this study was not a fair assessment of the value of homework due to improperly drawn conclusions. He felt that DiNapoli's recommendation against compulsory homework was merely given to support the popular view of the early thirties that compulsory homework should be eliminated.

Coulter, Frank. "Homework: A Neglected Research Area." British Educational Research Journal 5 (1979): 21-32.

Coulter, in his review of the literature on homework research, reported that many of the homework studies had problems. One major weakness was that homework was usually thought of in "quantitative rather than qualitative terms" (p.23). Coulter stated that researchers of the early 1930s were not interested or concerned with the quality of the homework given or the conditions under which it was carried out. In addition, the studies did not provide enough data about the kinds of homework given, the test criteria used, or the specific subjects involved.

Coulter found that much of the research available depended on surveys and assumptions. It was assumed that homework was carried out in the manner and under the conditions defined by the teacher and researchers. Coulter reported that direct observation in the classroom and in the home was missing. There was a need for researchers to go directly into the classroom to observe the manner in which teachers actually go about structuring and sequencing homework assignments. The same situation held for the home; direct observation should have been made of the physical condition under which homework was carried out.

Friesen, C. D. "The Results of Homework Versus No-Homework Research Studies." Microfiche. (ED 167 508) 1979: 1-19.

In a review of 24 research studies on the effectiveness of homework conducted between 1923 and 1979, Friesen reported there was no "clear-cut" endorsement for either homework or no-homework (p.15). Of the 14 studies, 12 experiments demonstrated positive effects of homework on achievement, 11 found no differences or negative effects, and one yielded mixed results. Friesen stated that there was no study that was able to carefully control the many variables that affect the relationship between homework and no-homework. He suggested that individual teachers should decide whether homework was needed and, if it was necessary, they should structure the assignments to maximize student achievement.

Hedges, W. D. "Guidelines of Developing a Homework Policy." The National Elementary Principal XLIV (2) (1964): 44-47.

Hedges reviewed 40 of 292 studies on homework published during the period between 1954 and 1969. He considered these 40 studies to be the "most thorough" (p.45). Hedges concluded that there was no "firm or comprehensive research evidence on the various facets of homework" (p.45).

TRENDS IN ATTITUDES TOWARD HOMEWORK

"The First Step to Change the Public Schools." The Ladies' Home Journal 30.1 (1913): 3-4.

Homework became a topic of interest in the United States at the turn of the century. Early controversy over the positive and negative effects of homework sparked experimental research on homework. The press became concerned over the topic and the Ladies' Home Journal conducted a survey of administrators, medical doctors, and parents about the effects of homework on children. The article suggested that there should be no more home study in the public schools. They opposed homework on grounds that it was unwholesome, professionally unsupervised, and allowed the children to practice mistakes.

Good, Warren R. "Opinions on Homework for Elementary School Pupils." Elementary School Journal 27 (1926): 122.

As early as 1926, there was a difference of opinion concerning homework. An article by Good appeared in the Elementary School Journal stating:

> There should be no compulsory home tasks assigned in the lower grades, and there may be serious doubts as to the wisdom of requiring homework in any of the grades of the elementary school...the reasonable plan being to have such work done voluntarily, following the inclination of the child in selecting his particular assignment. (p. 122)

Good did not favor the abolishment of all home study, but felt that the student's interest must be considered. He thought that the teacher's ability to create interest in homework was an important factor.

Crawford, C. C. and J. A. Carmichael. "The Value of Home Study." Elementary School Journal 38 (1937): 194-200.

Many early researchers did studies involving a no-homework policy; homework was abolished for a semester or two, in one or more subjects, to study the effects on achievement. Between 1927 and 1932, a study was conducted by Carmichael in El Segundo, California that addressed this point. The Standford Achievement test was given in grades 5-8 for three years. During the first three years the children were assigned homework, and during the last three years no homework was given. Based on these test scores, Carmichael concluded that there was a slight but non-significant difference favoring homework. In the follow up study, Crawford and Carmichael (1937) found a deterioration in high school grades among those students who attended El Segundo elementary school after homework was abolished. The researchers concluded that a no-homework policy in the elementary grades adversely affected academic performance in high school. This study was one of the few attempts to investigate the effects of homework over a long period.

Foyle, Harvey, and Gerald D. Bailey. "Homework. Selected References." Microfiche. (ED 250 275) 1984: 1-16.

The launching of Sputnik by the Russians in October 1957, caused experimental research on homework to increase. There was a change in a 50-year trend toward less homework. Prior to Sputnik there were 18 homework experiments; after Sputnik there were 66 homework experiments.

Wildman, P. R. "Homework Pressures." Peabody Journal of Education 45 (January 1968): 202-204.

The affects of too much pressure on students from gigantic homework assignments and how it was affecting their mental health was receiving a lot of attention. Wildman reported that some physical effects from these pressures were being seen in "organic disorders, such as ulcers and nervousness" (p. 202). One of the basic arguments against the excessive amount of homework was that after a long school day, the children were tired.

Bond, G. W., and G. J. Smith. "Homework in the Elementary School." The National Elementary Principal XLV.3 (January 1966): 46-50.

Bond and Smith surveyed 77 New York school districts to find out about their school policy concerning homework. Almost three-fourths of the districts reported that they had established no specific procedures to guide teachers, parents, and principals.

Check, John F. "Homework--Is it Needed?" Clearing House 41 (November 1966): 143-147.

Educators noticed a trend back toward more homework and a new emphasis on subject matter. Check reported that admissions standards of colleges and universities were more strict, and the trend was for higher grade point averages. He administered a questionnaire to six different populations of students, parents, teachers, professors, and education majors to see how they viewed homework. He found that homework was viewed as means for academic excellence. Parents and teachers were strongly in favor of homework.

Austin, J. D. "Homework Research in Mathematics." School Science and Mathematics 2 (1979): 115-121.

Austin reviewed published research on homework in mathematics. Mathematics had been the primary area for homework experimentation in research. He reported since 1957, 59 out of 65 cited homework experiments were conducted in mathematics, mathematics-related subjects, and shorthand. Austin believed that after 1960, mathematics homework experiments became more complex. Different levels of mathematics achievement measures as well as attitude measures were often used.

National Commissions on Excellence in Education. "A Nation At Risk: The Imperative for Educational Reform." Washington, D.C.: United States Department of Education, April 1983.

The National Education on Excellence in Education was concerned over the current state of American education. In their 1983 report, they said that American students were devoting considerably less effort to schoolwork than students in other countries or students from previous generations. Their research showed that time spent in the classroom and on homework was often used ineffectively. The Commission reported that "The amount of homework for high school seniors has decreased...and grades have risen as average student achievement has been declining" (pp. 19-20). Because of this finding, the Commission's first recommendation under the category of "Time" was that "Students in high schools should be assigned far more homework than is now the case" (p.29). They believed that increasing homework requirements would be a means of improving student achievement.

THE NATURE AND PURPOSE OF HOMEWORK

DEFINING HOMEWORK

Strang, R.S. "Guided Study on Homework. What Research Says to the Teacher." No. 8 Microfiche. (ED 007 901) 1968: 1-30.

Strang's review on experimental research on homework focused on three types of research: surveys, opinion pieces and experimental investigation. However, most of her work centered on experimental research. Although she reported that most experimental research was "limited and inadequate" (p.2), she concluded that homework was necessary, and that it should be an enrichment of ideas taught in the classroom and a logical extension of classwork. She also reported that students should recognize the purpose of the assignments, many of which should be done on a voluntary basis. Strang believed the assignments should be designed to the student's needs and not be too long and involved.

Coulter, Frank. "Secondary School Homework, Co-operative Research Study Report No. 7." Microfiche. (ED 209 200) 1980: 1-160.

Coulter conducted case studies in high schools, in Australia, and after interviewing teachers and students established the following definition. He reported that homework was school work formally assigned by subject teachers and that this work was to be completed outside class time; this could be during school time, study periods, at home or in any other place. According to Coulter, his homework definition "goes beyond the popular stereo-type of homework as sedentary or home-based activity" (p.12) and should include research in the community.

Knorr, Cynthia. "A Synthesis of Homework Research and Related Literature." Microfiche. (ED 199 933) 1981: 1-50.

It appeared that educators have no commonly accepted definition of homework. Knorr reported that many educators viewed homework as a "separate task while many others view it as part of the larger unit of study, guided or independent, taking place in school or out" (p. 9). Knorr concluded these findings after reviewing forty-seven articles on homework from 1964 to 1981, and finding only two studies, Bond and Smith (1966), and Maertens (1968), that gave definitions. Knorr reported the Bond and Smith's definition as: "homework refers to tasks that the child is assigned to do on his own time, after school hours, as an extension of his classroom work" (p.46). She stated that Maertens defined arithmetic homework as: "arithmetic material which has been consciously assigned to be completed outside regular school hours" (p.657).

KINDS OF HOMEWORK ASSIGNMENTS

Holtzman, W.H. "Study-Homework and Assignments." Encyclopedia of Educational Research 4th ed., The MacMillan Company: New York, 1969: 1389-90.

There have been many attempts by researchers to identify different kinds of homework. The author, in his explanation of homework assignments, recognized certain types of assignments. He compared "teacher-dominated assignments" to assignments resulting from joint planning by both the teacher and the student (p. 1390). He also reported a difference between guided and independent study, when the student's interest is self-directed and the teacher remained in the background.

National Education Association. "Homework. What Research Says to the Teacher." No 36, Microfiche. (ED 118 559) 1975: 1-34.

This booklet by the N.E.A. reported that the kind of homework assigned to students was just as important as the amount of time spent on it. The document recommended that homework assignments may be arranged on "a continuum from the extreme mechanical, routine exercises required of all students to the other extreme of creative projects or experiments undertaken voluntarily, by individuals" (p.14). The report suggested that the following types of homework be assigned: (1) assignments that required a research-type of reading thus encouraging practice in locating sources of information, (2) assignments that demand "initiative, imagination, and individual effort" (p. 14). (3) independent study projects, (4) creative assignments, and (5) written work and discussion.

Epstein, J. L. "Homework Practices, Achievements, and Behaviors of Elementary School Students." Microfiche. (ED 250 351) 1983: 1-27.

Seven purposes of homework were identified by Epstein. The data were taken from a survey in 16 Maryland School districts and educators, parents, and students participated. Epstein stated that most of the teachers who were involved in the survey explained that the main reason they assigned homework was to give students time to practice skills learned in class. The purposes were: practice, participation, personal development, parent-child relations, policy, public relations, and punishment.

Epstein stated that most research on the effects of homework had been conducted at the secondary school level. She found that equally important was research at the elementary level, because the experiences of young students can determine the group or track they enter in the secondary schools. Epstein reasoned that homework would be a very important practice, if it were shown to help more elementary students attain grade-level skills needed for success in junior high school.

REASONS FOR AND AGAINST HOMEWORK

LaConte, R.T. "What Research Says to the Teacher. Homework as a Learning Experience." Micofiche. (ED 217 022) 1981: 1-32.

LaConte, in his report on homework, gave the following reasons most often cited by educators for assigning homework: (1) to stimulate intellectual discipline, (2) to ease time constraints on the amount of curriculum material to cover in class, (3) to foster student initiative, independence, and responsibility, (4) to supplement and reinforce work done in school, and (5) to bring home and school closer together.

LaConte found that students generally believed that homework helped them achieve better grades; this attitude had remained fairly constant over the years.

Garman, D. "Who's Doing Homework Tonight?" ...Teacher Today 2.1 (Fall 1986): 1-6

According to the Institute of Educational Research, educators reported the following negative reasons for giving homework: (1) homework promoted negative attitudes toward school, (2) increased misconceptions because students learn in unsupervised conditions, (3) promoted rote learning and busy work, (4)encouraged teachers to give all students the same assignments, (5) overloaded the teacher with planning and correcting assignments, (6) increased tension between students and parents, (7) penalized students who cannot receive help at home, and (8) interfered with students' leisure time.

PLANNING, ASSIGNING, AND EVALUATING HOMEWORK

Lee, J. F., Jr. and K. W. Pruitt. "Homework Assignments: Classroom Games or Teaching Tools?" Clearing House 53 (1979): 31-35.

After the "back to basics" movement in education, homework assignments increased and became an area of confusion and conflict for many teachers. To help pre-service and in-service teachers clarify their homework policies and practices, Lee and Pruitt designed a taxonomy of homework. They felt that in order to gain maximum benefit from any assignment, teachers should first determine the purpose behind making the assignment; this purpose would then determine the homework policy. Their taxonomy included the following four types of homework assignments.

Practice	The most common assignment designed to drill or reinforce skills and information covered in class.
Preparation	These assignments are given to prepare students to profit from future lessons.
Extension	These assignments are given to discover whether the student can extend the concept or skill learned in class to a new situation. These assignments require abstract thinking.
Creative	Creative assignments require students to integrate many skills and concepts in producing some project. (e.g., book reports; research projects.)

Foyle, Harvey, and Gerald Bailey. "Homework in the Classroom: Can It Make a Difference in Student Achievement?" Microfiche. (ED 257 796) 1985: 1-14.

Foyle and Bailey conducted a study specifically using Lee and Pruitt's homework taxonomy (1979). They chose to examine two of the four parts of the taxonomy: preparation homework (getting ready before the classroom lesson), and practice homework (repeating the lesson to clarify). The purpose of the study was to determine which type of homework produced student achievement in social studies. The study produced the following results: (1) there was a significant difference in achievement scores between students who were assigned homework and students who were not assigned homework, (2) both types of homework raised student's achievement when compared to the students who were not assigned homework, and (3) females and males achieved the same regardless of the type of homework assigned to them.

Foyle and Bailey recommended using the two parts of the taxonomy and suggested that teachers can assign preparation and practice homework on the basis of subject matter objectives, their personal preferences, and their teaching style. Teachers need to decide whether the classroom lesson will be better understood if prepared for in advance by the student, or whether the classroom lesson would clarify the homework assignment.

Austin, J. D. "Do Comments on Mathematics Homework Affect Student Achievement?" Science and Mathematics 76 (1979): 269-272.

Austin did a study to investigate whether homework comments can be a significant factor in improving student achievement in general math classes. This study was related to the work of Page (1958) on the same topic. Austin used 222 students from nine high school mathematics classes and randomly assigned them to two treatment groups. In one group, homework was either corrected and graded without comment. In the other group, homework was given a grade plus written corrective information, praise and encouragement. Findings from the study showed that comments seemed to improve student achievement in some math classes, but not in others. Austin reported that the results of the study were not conclusive. Although homework comments showed some evidence of improved achievement, comments alone didn't necessarily improve achievement significantly.

Walberg, H. J., R. A. Paschal, and T. Weinstein. "Homework's Powerful Effects on Learning." Educational Leadership 42.7 (1985): 76-79.

In this report, Walberg, Paschal, and Weinstein included information on their research of 15 empirical studies assessing the overall effects of homework. Their synthesis produced the following results about grades and comments on homework:

Larger effects on achievement were found for homework that has been graded and commented upon. When homework is merely assigned without feedback from teachers, it appeared to raise the typical student at the 50th percentile to the 60th percentile. However, when it is graded or commented upon, homework appeared to raise learning from the 50th to the 70th percentile. This graded-homework effect "is the largest one discovered in educational research literature" (p. 76).

Austin, J. D., and K. A. Austin. "Homework Grading Procedure in Junior High Mathematics Classes." School Science and Mathematics 74 (1974): 269-272.

Austin and Austin used 51 seventh and eighth grade students in a seven week study to investigate the effects of two methods of grading math homework. One group had every problem corrected on each assignment, and the other group had a random half of the problems corrected. No significant differences were found on test achievement between the two groups. The researchers concluded that "it may be a waste of the teacher's time to grade every problem on every homework assignment" (p. 272). They suggested that the teacher select a portion of the assignments for grading, because spot checking of homework assignments produced similar student achievement results as complete checking.

Koch, E. A. "Homework in Arithmetic." Arithmetic Teacher 12 (1965): 9-13.

Koch conducted a study that examined the value of regularly assigned homework. 85 sixth grade students were assigned to one of three arithmetic classes for a ten-week period; each class was taught by a different teacher. The first group was given long daily assignments (thirty minutes), the second group was assigned short daily homework (fifteen minutes,) and the third class received no assignment. The findings revealed that there were significant differences that favored the two homework groups over the no-homework group. Also, there were smaller differences that favored the thirty minute group over the fifteen minute group. Koch concluded that daily assignments were a significant factor in raising the achievement level of learning in math.

Peterson, J.C. "Four Organizational Patterns for Assigning Mathematics Homework." School Science and Mathematics 71 (1971): 592-596.

Peterson examined the need for individualized homework assignments. In his study, he found gains in mathematics achievement when "semi-oblique" organizational patterns were used in homework activities (p.592). These patterns encouraged students to explore the next-topic before completing the previous ones. Peterson reported that revision exercises that are spaced over time, particularly in the case of low-ability students who may be less able to meet the shorter and more intensive demands of massed review homework exercises, were beneficial.

Singh, Jane M. "An Investigation of the Effect of Individualized Enrichment Homework Upon the Academic Achievement of Children in the Fourth, and Sixth Grade." Microfiche. (Ed 042 585) 1970: 1-5.

This experimental study was conducted to determine whether individualized enrichment homework (IEH) assignments made a difference in academic achievement on elementary students. Singh used two groups of 4th, 5th, and 6th grade students in her study. The first group was given IEH assignments in six subject areas during the first 16 weeks of the academic year. These assignments were student-structured; the students were given complete freedom in planning the homework. However, with guidance from the teacher, the students analyzed their own needs and selected the appropriate assignment. The second group was given no IEH assignments during the same time period. The findings revealed that there were a significant difference in academic achievement in all grades which had individual enrichment homework as against those who did not. Singh found out that students actively involved in their own learning, structured to their own personal interest, made gains in achievement.

Friesen, C. D. "The Effects of Exploratory and Review Homework Exercises Upon Achievement Retention and Attitude in a First Year Algebra Course." DAI 36 (1976): 6527 A.

Friesen examined preparation homework assignments followed by review in class to determine the effects of exploratory exercises on algebra achievement. In Friesen's study, 143 junior high school students were divided into two groups: (1) a control group that followed a traditional program of homework math problems relating to a particular day's work, and (2) an experimental group who did exploratory homework exercises for two days before the class teaching of the topic and review exercises for two days after the instruction. The findings showed that the experimental group out-performed the control group both on text-book chapter tests and on a retention test four weeks after the completion on the unit. The study indicated that achievement may be enhanced by exercises of an exploratory nature that provide a good foundation for class work.

Foyle, Harvey, and Gerald Bailey. "A Homework Guide: Winning the Game of Student Achievement." Kappa Delta Pi Record 213 (1985): 68-70.

Foyle and Bailey's research on homework revealed that homework increased achievement when certain types of assignments were used, specifically preparation and practice (Homework in Classroom, 1985). Based on this research and other experiments, the authors developed five basic guidelines for evaluating homework.

1. Homework should be regularly assigned. Homework produced higher student achievement when assigned about three times per week in a subject area. The length of the assignment should be considered.
2. Homework should be clearly stated. Written assignments on the board and clearly written homework instruction sheets are appropriate. The assignment should be explained.
3. Homework should be regularly collected. Required homework should be collected or students will not complete the assignment. By collecting the work, the teacher shows the students that homework is important.
4. Homework should be promptly graded. By assigning a grade to homework the teacher emphasizes that homework is important. Spot checking of homework assignments produce similar achievement results as complete checking of homework.
5. Homework should be promptly returned. Immediate feedback increases student achievement.

THE EFFECTIVENESS OF HOMEWORK

TIME SPENT ON HOMEWORK

Walberg, H. J. "Improving the Productivity of American's Schools." Educational Leadership 41 (May 1984):19-36.

Research on the productive factors of learning was done by Walberg. He found that the factor time was important to leaning and that "time-on-task" predicts how much will be learned. He reported that time is by no means the only ingredient of learning, but without it, little can be learned. Walberg suggested that time spent on homework can be considered an extension of the school day and increasing the amount of time students spend on supervised homework can increase achievement.

Eddy, Yvonne. "Developing Homework Policies." Eric Digest Microfiche. (ED 256 473) 1984: 1-3.

This document examined research findings about the amount of time elementary school students spend doing homework assignments and compared differences between types of school groups. Using statistics from the October 1983 U.S. Census survey, the digest stated that the average elementary school students spent five hours a week, on homework; public school students studied 4.9 hours a week, and private school students studied 5.5 hours. High school students reported doing almost seven hours of homework a week, ranging from 6.5 hours for public school students to 14.2 hours for private school students. The report explained this difference was due to the college-preparatory orientation of many private schools to the more varied nature of public schools.

Walberg, H. J., R. A. Paschal, and T. Weinstein. "Homework's Powerful Effects on Learning." Educational Leadership 42.7 (1985): 76-79.

Walberg, Paschal, and Weinstein recommended that additional homework would promote American students' achievement. To support this recommendation, they used international comparisons of year-round study time in their report. They compared the time spent on homework of the American students to the Japanese students. The authors reported that if typical American students add four hours of homework per week to 30 nominal hours of school work (six hours per day for five days a week), they have added "13 percent to their nominal learning time in school" (p. 78). In comparison, if typical Japanese students add about 16 hours of homework to 36 hours of schooling including Saturdays, their homework raises learning time 44 percent. The total weekly learning time in Japan, about 52 hours, is thus 53 percent higher than the 34 hours in the United States. The researchers concluded that greater amounts and higher standards of homework would benefit American students' learning.

Keith, T. Z., T.M. Reimers, P. G. Fehrmann, S. Pottebaum, and L. Aubey. "Parental Involvement, Homework, and TV Time: Direct and Indirect Effects on High School Achievement." Journal of Educational Psychology 78.5 (1986): 373-380.

There are important influences on school learning that are manipulable. The authors suggested that three variables generally considered to influence academic achievement were time spent doing homework, parental involvement in students' academic and social lives, and leisure TV watching. By using the massive High School and Beyond data set in their study, the authors stated that the three variables may well be interrelated, affecting each other as well as achievement. The results showed that time spent watching TV had important effects on the achievement of high school seniors. More than half of the HSB seniors reported doing three hours or less of homework per week, whereas 46 percent reported spending three hours or more per weekday watching TV. The more TV students watched, the worse the academic achievement.

Ward, B., and Others. "The Relationship of Students' Academic Achievement to Television Watching, Leisure Time Reading and Homework." Microfiche. (ED 236 249) 1983: 1-51.

Television viewing appeared to compete to some extent with time spent on homework. The National Assessment of Education Progress gathered data on television viewing habits of 9-, 13-, and 17-year old students across the country during its 1979-80 assessment of learning skills. The study compared amounts of homework completed to leisure time reading. Ward reported that fewer 17-year-olds compared to 13-year olds do any homework at all. Thirty-six percent of the 13-year-olds and forty-four percent of the 17-year-olds either had no homework assigned or did not do their assignments. Of students with homework assignments, those spending the most time on homework spent the least time watching television at both ages. Among 13-year-olds who did not do their homework however, the tendency was to watch more television: over half of this group watched three or more hours of television a day. The study also showed that students who watched television and did homework or reading at the same time were among the poorest readers.

EFFECTS OF HOMEWORK ON ACHIEVEMENT

Paschal, R.A., T. Weinstein, and H. Walberg. "The Effect of Homework on Learning: A Quantitative Synthesis." The Journal of Educational Research 78.2 (1984): 97-102.

Paschal, Weinstein, and Walberg used a computer search of empirical studies on homework to examine the academic achievement of elementary and secondary students. 15 studies were used in the final sample. The statistical results indicated about 85 percent of the effect size comparisons favored homework rather than no-homework. Some of the important findings are as follows:

1. Assigned homework produced more learning than no-homework; traditional homework was superior to non-traditional homework.
2. Greatest benefits from homework were seen in subjects of reading and social studies tests than on tests of other subjects.
3. Daily homework assignments showed greater effects than sporadic homework assignments.
4. Homework brought equal benefits for lower and middle socio-economic groups.
5. Homework affects learning three times as much as socio-economic status (as indexed by parental income, education, and occupation). Poor students who work hard and do their homework can academically excel over rich students who do not do homework.

Polachek, S. W., H. J. Kniesner, and H. J. Harwood. "Educational Production Functions." Journal of Educational Statistics 3.3 (1978): 209-231.

Palachek, et al., examined scholastic performance of college students by mapping the time and effort students spend on study with the education offered by the school. Through mapping, they found that ability and time devoted to various aspects of the learning process was the most important determinants of students' accomplishments. The results indicated that less able students can compensate for differences in ability by spending more time on homework and extra class attendance. Thus, a diligent student with a poor educational background can be academically successful.

Stanley, J. C. "Manipulate Important Educational Variables." Educational Psychologist 19 (1980): 164-71.

Homework appeared to have positive effects on the gifted student. Stanley focused on students in the upper three percent of the achievement range in mathematics, and found "the main variable differentiating the successful students, who move ahead at astonishing speeds, from the unsuccessful students was homework" (p. 164). He reported that the students who do their homework well succeed in school, and those who do it poorly cannot keep up. Stanley concluded the more equal the students are in general intelligence and show a natural ability in math, the more obvious this fact becomes.

Keith, Timothy Z. "Time Spent on Homework and High School Grades: A large-Sample Path Analysis." Journal of Educational Psychology 74.1 (1982): 248-253.

A large longitudinal research study, High School and Beyond provided useful data for studying the effects of homework on 20,364 seniors' school achievement, as measured by grades. Keith reasoned that although some types of standardized test scores are good measures of achievement, grades in school are the most frequent indicators of such achievement and are easily understood by parents, students, and most personnel. His findings showed that ability influenced grades the most, but the amount of time spent on homework also had measurable impact on grades for all levels of ability. Keith discovered that the average time spent on homework by this national sample of students was low, only about three hours a week. However, the grades the students received were inflated (averaging close to a B). He concluded that if grading standards were more strict and more homework was required, the influence on grades of time spent on homework would even be greater.

The study showed that homework helped the low-ability students. Keith found that low-ability students who spend three hours per week on homework get the same grades as the average ability students who spend no time on homework.

Doane, B. D. "The Effects of Homework on Locus of Control on Arithmetic Skills Achievement in Fourth Grade Students." DAI 33 (1973): 5548A.

In comparing the effects of homework on high and low achieving students, Doane investigated the relationships between certain kinds of math homework and the school achievement of particular kinds of students. In this study, he reported that the relationship between homework and mathematics achievement was strong for high achieving students, but weak and non-significant for low achievers. The homework assignments were reinforcement drills of math concepts covered in class, however, Doane suggested that the low achieving group had not understood the concepts and that the homework was confusing and difficult. He concluded that low achieving groups in particular profited little from homework where initial concepts introduced in class were not understood.

Keith, T. Z., and E. B. Page. "Homework Works at School: National Evidence For Policy Changes." School Psychology Review 14.3 (1985): 351-359.

The authors used data from the High School and Beyond study to examine the influence of homework on achievement, as measured by test scores and grades. Their findings showed for all analyses, homework had a meaningful influence on achievement for white seniors as well as for minority seniors. In fact, it appeared that for Hispanic and black seniors, homework time had even more influence on achievement than for seniors in general.

THE HOME-SCHOOL RELATIONSHIP WITH HOMEWORK

PARENT INVOLVEMENT

Walberg, H. J. "Families as Partners in Educational Productivity." Phi Delta Kappan 65.6 (1984): 397-400.

Walberg reported that a strong effect on learning was the influence of the home environment because of the large fraction of the student's time spent outside the school and potentially under parental control. He stated that "through the formative years--until the end of high school--parents nominally control 87 percent of a student's waking time" (p.397). Walberg explained that this time at home strongly influenced the productivity of school time. He suggested that if this time were spent in adademically-stimulating conditions in the home, then the total amount of the students' total learning time would be dramatically raised beyond the 13 percent of the time in conventional schools. (The 12 years of 180 six-hour days in school add up to only about 13 percent of the waking educative first 18 years of life.)

Epstein, J, L., and H. J. Becker. "Teachers' Reported Practices of Parent Involvement: Problems and Possibilities." Elementary School Journal 86 (1986): 277-294.

Epstein and Becker emphasized in this report that surprisingly little research had been done on the topic of home and school communication. They reported that because of this lack of research on the effects of parent involvement, "it is impossible to assure teachers that certain practices will lead to improved student skills, improved parent-child exchanges, or improved parent-teacher relations" (p.111). Epstein and Becker also said that "it is equally impossible to assure teachers that they can be more successful if they ignore parent involvement" (p.111). They concluded that more research on this topic would be beneficial.

Maertens, N. and J. Johnston. "Effects of Arithmetic Homework Upon the Attitude and Achievement of Fifth and Sixth Grade Pupils." School Science and Mathematics 72 (1972): 117-126.

In this study, the researchers sought to determine the effects of training parents to provide immediate feedback on their children's math homework assignments. Fourth, fifth, and sixth grade students were divided into three treatment groups. In one group no homework was assigned, and in the other two groups daily assignments were given. One of these groups received feedback from their parents at the completion of each problem , and in the other group the parents checked the answers after the assignment was completed. Maertons and Johnston found that there were significant differences between the homework group and the no-homework groups. They recommended that when homework was assigned, parents be encouraged to become involved, atleast to the extent of providing feedback to the child.

PARENTS' AND STUDENTS' ATTITUDES TOWARD HOMEWORK

Gallup, Alex M. "Gallup Poll of the Public's Attitudes Toward the Public Schools." Phi Delta Kappan 67 (1985): 35-37.

The 17th Annual Gallup Poll reported their findings about public's attitude toward assigning more homework in the public schools. The 1985 survey showed the public supported an increase of homework for high school students by a ratio of almost 5-3 with 47 percent in favor and 31 percent opposed. In the case of the elementary students, 40 percent of the public were in favor and 38 percent were opposed to more homework. Parents of children enrolled in public school and parents who have no children in school were in favor of more homework. However, parents whose children are in high school and elementary school and receive average or below-average grades are somewhat more likely to favor increased homework than are parents whose children do above average work.

Epstein, J. L. "Parents' Reactions to Teacher Practices of Parent Involvement." Elementary School Journal 86 (1986): 277-294.

In this survey parents of 1,269 students in 82 third- and fifth-grade classes in Maryland's elementary schools completed questionnaires on parent involvement practices of their children's teachers. The results indicated that parents believed that the schools could do more to involve them in home learning activities. Epstein reported that 85 percent of the parents spend 15 minutes or more helping their children on homework activities when asked to do so, but the parents felt they could help more, 44 minutes, on the average, if shown how to help. Epstein also found from the survey, that parents suggested that the schools organize workshops to teach them how to help in reading, math and other homework-type activities.

Langdon, G., and I. Stout. "What Parents Think of Homework." National Education Association Journal 52 (1963): 9-11.

Langdon and Stout studied the feelings of parents concerning homework. 300 parents representing all levels of educational backgrounds and occupations, made up the sample. They discovered that parents felt that homework did the following:

1. developed self-discipline,
2. enriched the experience of the school day,
3. provided opportunities for independent study,
4. helped to draw home and school together.

The parents preferred homework that:

1. could be successfully completed in a reasonable time period,
2. could be understood by the student,
3. would keep the students interested in learning.

Natriello, Gary and E. L. McDill. "Performance Standards. Student Effect on Homework, and Academic Achievement." Sociology of Education 59 (January 1986): 18-31.

The purpose of this study was to examine the effects of teachers', parents', and peers' standards on student effort and achievement. Natriello and McDill analyzed that higher standards set by these groups generated greater student effort on homework. The authors used data from a 1964-65 study of students in 20 American high schools that contained items describing both the student background characteristics and the performance standards to which students are subjected. They found that when academic standards are high, students devote more effort and perform somewhat better than when standards are extremely low. The student work harder on school tasks and spend more time on homework. When teachers, parents, and peers all have high standards, students spend an additional 30 minutes per night on homework. The authors concluded that higher standards can have a significant impact on this form of student effort.

Patton, J. E., T. A. Stinard, and D. K. Routh. "Where Do Children Study?" Journal of Educational Research 76 (1983): 280-286.

Home study conditions of 387 students in grades 5 through 9 were surveyed in Cedar Rapids, Iowa. Patton and others examined the actual conditions under which students do their schoolwork to discover how environmental events (distractors) affect children's learning and study behavior. They found that most students regardless of reading skill level, selected quiet settings to perform reading assignments, but did Mathematics and written work with a radio, stereo, or TV on. Junior high students were more likely to prefer quiet settings for reading, and preferred radio or stereo to TV while doing mathematics. Overall, TV was considered to be a moderate distractor, but radio or stereo was generally regarded as beneficial. Patton, Stinard, and Routh concluded that a particular study settings may be better suited for performing certain types of homework.

Friesen, C.D. "The Results of Surveys, Questionnaires and Polls Regarding Homework." Microfiche. (ED 159 174) 1978: 1-13.

Friesen studied periodic polls, surveys and questionnaires from 1916 to 1977 to examine how students, parents, teachers, and administrators felt about the subject of homework. Results weren't always consistent from study to study. When administrators were asked at what grade homework should begin, they stated that homework for students at the fourth grade level and above was warranted. They felt that homework was inappropriate and ineffective in the primary grades.

SUMMARY

Homework has been a controversial issue even to the point of definition. It appeared that educators had no commonly accepted definition of homework. Knorr, after reviewing forty-seven articles on homework and finding only two definitions, reported that many educators viewed homework as guided or independent schoolwork taking place in school or out; some considered it a separate task,while others viewed it as part of a larger unit of study. Strang stated that homework should be a logical extension of classwork, enriching the students' knowledge of ideas taught in school.

Late in the nineteenth century controversy over the positive and negative effects of homework sparked experimental research on homework. However, there was an absence of sound research in the studies (Rickards). Goldstein completed one of the first thorough investigations of experimental research on homework and reported that only 17 articles from 280,were original reports of experimental research.

Coulter stated that the early studies yielded conflicting results as well as having flaws. For example, researchers thought of homework in terms of quantity instead of quality. Consequently, the studies did not provide enough data about the kinds of homework given, the test criteria used, or the specific subjects involved. In Goldstein's review, he explained how DiNapoli had drawn conclusions that were unwarranted in terms of the data in his study. That report which supported the popular view of the early thirties that compulsory homework should be eliminated was misinterpreted,since his recommendations rather than his actual

findings were unfavorable toward homework.

During three decades of the twentieth century --1900-1920, 1930-1940, and 1970-1980 --teachers and parents had strongly questioned the amounts and kinds of homework assigned, the effects of homework on children's mental health (Wildman), and whether homework had benefical effects on achievement. As early as 1913, The Ladies' Home Journal opposed homework on grounds that it was unwholesome. Good questioned whether doing compulsory homework in any grade was worthwhile. During 1930-40, studies of DiNapoli, Crawford and Carmichael, and others contributed to a shift in American schools toward less compulsory homework and more school-based study. However in 1957, when the Russians launched Sputnik, a man-made satellite, there was another change back toward more homework. Foyle and Bailey (1984) reported that prior to Sputnik there were 18 homework experiments; after Sputnik there were 66 homework experiments. Check's report showed that there was a new emphasis on subject matter, and that homework was viewed as a means for academic excellence. In the post-Sputnik period 1957-67, the "New Math" brought demands for more homework. Austin(1979) reported that mathematics was a primary area for homework experimentation in research and since 1957, 59 out of 65 cited homework experiments were conducted in mathematics, and mathematics-related subjects. During 1967-77, the pressure to give more homework once again had decreased, but in 1983 there was another swing back toward homework. This was due to the report by the National Commission on Excellence in Education that criticized homework practices in the schools and recommended more homework for high school students. Once again,

the pressure to increase homework surfaced.

Today, the controversy over the value of homework simmers on. The Institute for Educational Research (Garman)stated that opponents have argued that homework promoted negative attitudes toward school, encouraged teachers to give all students the same assignments, increased misconceptions because students learned in unsupervised conditions, increased tension between students and parents, and overloaded the teacher with planning and correcting assignments. Negative reviews about homework research were presented by Hedges, and Friesen (1979); they stated that research yielded inconclusive findings about the effects of homework on learning. However, proponents of homework reported new findings have revealed that homework does have a powerful positive impact on achievement (Keith, 1982; Paschal, Weinstein and Walberg, Foyle and Bailey).

In order to recognize the impact of these findings on achievement, an understanding of the kinds and purposes of homework must be acquired. Holtzman identified teacher-dominated assignments and assignments planned jointly by students and teacher. The National Education Association acknowledged the following types of homework: reading assignments involving research, independent study projects, creative assignments, written work and discussion, and assignments that demand initiative, imagination, and individual effort, The N.E.A. recommended that homework assignments should be arranged on a "continuum from the extreme mechanical completed by all students, to the other extreme of creative projects completed voluntarily by students" (p. 4).

There are many purposes for giving homework, but the reasons most often cited were listed in LaConte's report: to stimulate intellectual discipline, to cover curriculum, to foster student initiative, independence and responsibility, to tie bonds between home and school, and to supplement work done in school. Epstein's survey (1983) of teachers showed that most teacher's main reason for giving homework was to allow students time to practice skills learned in class.

Teachers need to give the same care in preparing homework assignments as they give to classroom instrucion. Coulter(1980)stated that effective assignments should link homework with classwork and expand learning beyond the school. Paschal, et al., found that traditional assignments increased student's achievement and thought-provoking assignments increased students' desire to learn. Lee and Pruitt recommended that before teachers choose the type of homework assignment, they must determine their purpose for giving the assignment. This purpose would then guide them in selecting one or more of the following types of assignments for homework: practice, preparation, extension, or creativity. Foyle and Bailey, (Homework in Classroom, 1985) found evidence that practice and preparation homework raised students' achievement.

Several studies examined the structuring, explaining, collecting, and evaluating of assignments. Koch investigated the value of regularly assigned homework and concluded that daily assignments increased students' mathematics skills. Foyle and Bailey, (Homework Guide, 1985) found that homework provided higher student achievement when assigned three times per week in subject

areas and that written instruction for homework followed by discussion were more effective than an oral announcement. Researchers Austin and Austin did research on grades and comments on homework. They concluded that immediate feedback increased achievement and spot checking of homework assignments produced similar achievement results as complete checking of homework. These studies supported Foyle and Bailey's five basic guidelines for evaluating homework: (1) Homework should be regularly assigned. (2) Homework should be clearly stated. (3) Homework should be regularly collected. (4) Homework should be promptly graded. (5) Homework should be promptly returned (Homework Guide).

Several authors, Walberg (1984); Keith, et al, 1986, have suggested that the total time spent studying influenced how much was learned. Walberg added that homework was an extension of the school day, and increasing the amount of time students spend on supervised homework increased achievement. Walberg (Improving, 1984) stated that homework had a meaningful influence on achievement because homework conditions can be controlled. Teachers, parents, and students determine how much, how useful, and how good the homework was. For example, Keith examined time spent on homework by high school students and found the average time spent on homework was low, only about three hours a week; however, the grades the students received were averaging a B. Keith's findings concluded that if grading standards were more strict and more homework was required, the influence on grades of the time spent on homework would even be greater.

Many studies revealed that students in the United States study less and score lower than students in some other countries. As an example, Walberg et al., (1985) compared the time spent on homework of the American students to the Japanese students. He reported that the Japanese students spend 52 hours per week in the classroom and doing homework as compared to 34 hours per week by American students.

Research by Ward showed that television appeared to compete with time spent on homework. Surveys have shown that 46 percent of seniors reported spending three hours or less doing homework per week (Keith et al., 1986). The authors believed if leisure television viewing were reduced, there would be ample time for students to do homework when it was assigned.

Extra studying appeared to have positive effects on student performances at all grade levels and at all levels of ability. Polacheck et al. examined scholastic performances of college students and found that increased studying compensated for differences in ability. Keith; Paschal (1984); and Foyle and Bailey 1985 did studies with high school and elementary students. Keith showed that low-ability students who spend one to three hours per week on homework get the same grades as the average-ability students who do not do homework. However, Doane cautioned that unless the initial concepts introduced in the class are understood, little profit would be gained by these students in doing homework. Stanley focused on gifted students and found that "the main variable differentiating the successful students, who forge ahead well from the successful is homework" (p.164). Furthermore, homework seemed effective

for minority as well as white students. In Keith and Page's study, they found that for Hispanics as well as black seniors, it appeared that homework time had a stronger influence on achievement than for seniors in general. Finally, homework increased achievement levels for lower and middle socio-economic groups (Paschal et al.,).

Many studies, Walberg (Families,1984) and Maertens and Johnstons have shown that home environments and parental involvement have important effects on achievement. Surprisingly, Walberg reported that parents "nominally control 87 percent of the student's waking time" (p. 397), and if this time was spent in academically-stimulating conditions in the home, it can raise the student's total learning time.

Parents have consistently been strong supporters of homework. The 1985 Annual Gallop Poll showed that parents of children in public schools were in favor of assigning more homework to both public school and elementary students. Parents according to Langdon and Stout preferred homework assignments that students understand, that keep students interested in learning, and that can be completed in a reasonable amount of time. Epstein(1986) found that parents believed that schools should teach them how to help with homework activities. According to Maertens and Johnston, one way to help was for parents to provide immediate feedback. One negative finding concerning parent involvement was discussed by Epstein and Becker. They reported that there was no evidence that certain practices would "improve student skill, improve parent-child exchanges, or improve parent-teacher relations" (p. 111); but they also stated that it is equally impossible to

say that teachers can be more successful if they ignore parent involvement.

An attitude of students that had remained fairly constant over the years, was they generally believed that homework helped them achieve better grades (LaConte). Natriello and McDill found that when teachers, parents, and peers all have high standards, students work harder and spend more time on homework. Patton, Stinard, and Routh found that most students regardless of reading skill level selected quiet settings to do reading assignments, but did math and written work with a radio, stereo, or television on. They concluded that a particular study setting may be better suited for performing certain types of homework than others.

CONCLUSION

The research of the past 70 years had shown that attitudes about homework had been influenced by school reform. Educators had attempted to improve academic conditions of American schools by using homework as one of the solutions. When the Commission (1983) recommended that teachers increase the amount of homework they assign to improve school performance, interest in homework was again revived.

Early research on the effects of homework was inadequate (DiNaoli) and often yielded inconclusive findings. The dispute around homework had centered on whether it was good or bad for children. Goldstein, Friesen, and Hedges in their reviews of the early literature found only a few studies that showed homework contributed to academic achievement. However, current studies and reports by Walberg; Keith and Page; and Foyle and Bailey are more conclusive. They found positive evidence that showed that homework improved achievement, when measured by standardized tests or by grades (Keith, 1982).

It was concluded by Walberg that one of the productive factors of learning was time. Walberg (1984); Keith et al.(1986) concluded that homework boosts achievement because the total time spent studying influenced how much is learned. Studies by these researchers suggested that homework can be considered an extension of the day.

Extra studying helped children at all levels of ability. There was ample evidence that homework improved achievement for college students, high school,and elementary students. Further, homework improved achievement for minorities as well as white

students, and for gifted as well as low-ability students.

It was concluded that student achievement rose significantly when well-designed homework assignments were regularly assigned, and students conscientiously completed them. Coulter(1980) stated that effective assignments linked homework with the classwork and expanded learning beyond the school. Teachers, parents, and students determined how much, how useful, and how good the homework was. Lee and Pruitt concluded that their taxonomy of homework assignments, practice, preparation, extension, and creativity should not be chosen until each teacher determined the reason for giving the assignments. Homework was most useful when the assignments were thoroughly explained, included as an integral part of the curriculum, and carefully prepared. When students returned the assignments, the homework should be graded promptly with comments included.

Home environments were shown to be an important factor in the effectiveness of homework. Walberg (1984) and Epstein (1984) suggested that educators enlist families as partners and engage them directly in their efforts. Epstein found that parents were interested in devoting more time to helping their children with homework; however, workshops were needed to show them how. Patton et al. concluded that because some study settings were better for certain types of homework assignments than others, a good homework environment should be planned for.

RECOMMENDATIONS

A steadily mounting body of research is confirming the importance of homework; it appears that homework seems to have positive effects on achievement and these effects should not be ignored. Researchers have shown that doing homework extends the school day, but only when worthwhile assignments are given. If in this current round of interest in school reform, educators are serious about improving American students' academic performances, certain conditions must be addressed. It is recommended that:

1. Additional research experiments can be performed to estimate the effects of homework on learning more accurately. Quantitative synthesis of available research is helpful, but more well-executed experimental research can be done to determine what conditions positively determine academic achievement. Direct observations in the classroom and in the home can be included in the experiments in order to observe exactly how homework is being planned, assigned, and carried out.
2. Teachers and administrators can review and improve homework practices because they determine how good and useful assignments are.
3. Teachers can assign well-designed homework assignments and provide feedback for completed homework. Different kinds of homework can be assigned for appropriate learning and for various grade levels. Homework can be regularly collected and graded.
4. Teachers and parents can cooperate and focus on specific achievement goals. Workshops can be organized to teach

parents <u>how</u> to help with assignments.

5. Parents can be sure that assigned homework is completed.

6. Students can reduce their leisure television viewing to assure that there is time to do homework.

BIBLIOGRAPHY

Austin, J. D. "Do Comments on Mathematics Homework Affect Student Achievement?" Science and Mathematics 76 (1979): 269-272. (14, 28)

---. "Homework Research in Mathematics." School Science and Mathematics 2 (1979): 115-121. (9, 25)

Austin J. D., and K. A. Austin. "Homework Grading Procedure in Junior High Mathematics Classes." School Science and Mathematics 74 (1974); 269-272. (14, 28)

Bond, George W., and George J. Smith. "Homework in the Elementary School." The National Elementary Principal 45 (9) (1964) 46-50, "cited by" Cynthia Knorr, "A Synthesis of Homework Research and Related Literature." Microfiche. (ED 199 933) 1981: 1-50. (11)

Check, John F. "Homework--Is it Needed?" Clearing House 41 (1966): 143-147. (9, 25).

Coulter, Frank. "Homework: A Neglected Research Area." British Educational Research Journal 5 (1979): 21-32. (3, 7, 24)

---."Secondary School Homework, Co-operative Research Study Report No. 7." Microfiche. (ED 209 200) 1980: 1-160. (10, 27, 33)

Crawford, C. C., and J. A. Carmichael. "The Value of Home Study." Elementary School Journal 38 (1937): 194-200. (8, 25)

DiNapoli, Peter J. "Homework in the New York City Elementary Schools." Bureau of Publications, Teachers College. Columbia University, New York: 1937. (6, 24, 25, 32)

Doane, B. D. "The Effects of Homework on Locus of Control on Arithmetic Skills Achievement in Fourth Grade Students." DAI 33 (1973): 5548A. (20, 29)

Eddy, Yvonne. "Developing Homework Policies." (ED 256 473) (1984): 1-3. (17)

Epstein, Joyce L. "Homework Practices, Achievements, and Behaviors of Elementary School Students." Microfiche. (ED 250 351) 1983: 1-27. (3, 12, 27)

---. "Parents' Reactions to Teacher Practices of Parent Involvement." Elementary School Journal 86 (1986): 277-294. (22, 30, 33)

Epstein, Joyce L. and H. J. Becker. "Teachers' Reported Practices of Parent Involvement: Problems and Possibilities." Elementary School Journal 83 (1982) 103-113. (21, 30)

"The First Step to Change the Public Schools." The Ladies' Home Journal 30.1 (1913): 3-4. (1, 8, 25)

Foyle, Harvey, and Gerald Bailey. "A Homework Guide: Winning the Game of Student Achievement." Kappa Delti Pi Record 213 (1985): 68-70. (16, 27, 28)

---. "Homework in the Classroom: Can It Make a Difference in Student Achievement?" Microfiche. (ED 257 796) 1985: 1-14. (13, 16, 26, 27, 29, 32)

---. "Homework. Selected References." Microfiche. (ED 250 275) 1984: 1-16. (9, 25)

Friesen, Charles D. "The Effects of Exploratory and Review Homework Exercises Upon Achievement Retention and Attitude in a Year Algebra Course." DAI 36 (1976): 6527 A. (16)

---. "The Results of Homework Versus No-Homework Research Studies." Microfiche. (ED 167 508) 1979: 1-19. (1, 7, 26, 32)

---. "The Results of Surveys, Questionnaires and Polls Regarding Homework." Microfiche. (ED 159 174) 1978: 1-13. (3, 23)

Gallop, Alex M. "Gallup Poll of the Public's Attitudes Toward the Public Schools." Phi Delta Kappan 67 (1985): 35-37. (1, 22,30)

Garman, D. "Who's Doing Homework Tonight?" ...Teacher Today 2.1 (1986): 1-6. (1, 12, 26)

Goldstein, Avery. "Does Homework Help? A Review of Research." The Elementary School Journal 60 (1960): 212-214. (6, 24, 32)

Good, Warren R. "Opinions on Homework for Elementary School Pupils." Elementary School Journal 27 (1926): 122 (8, 25)

Hedges, W. D. "Guidelines of Developing a Homework Policy." The National Elementary Principal XLIV (2) 1964: 44-47. (7, 26, 32)

Holtzman, W. H. "Study-Homework and Assignments." Encyclopedia of Educational Research 4th ed., The MacMillan Company: New York, (1969): 1389-90. (11, 26)

Keith, Timothy Z. "Time Spent on Homework and High School Grades: A Large-Sample Path Analysis." Journal of Educational Psychology 74.1 (1982): 248-253.(20, 26, 28, 29, 32)

Keith, Timothy Z. and E. B. Page. "Homework Works at School: National Evidence for Policy Changes." School Psychology Review 14.3 (1985): 351-359. (20, 30)

Keith, Timothy Z., T.M. Reimers, P. G. Fehrmann, S. Pottebaum, and L. Aubey. "Parental Involvement, Homework, and TV Time: Direct and Indirect Effects on High School Achievement." Journal of Educational Psychology 78.5 (1986): 373-380. (1, 18, 28, 29, 32)

Knorr , Cynthia. "A Synthesis of Homework Research And Related Literature." Microfiche. (ED 199-933) 1981: 1-50. (11, 24)

Koch, E. A. "Homework in Arithmetic." Arithmetic Teacher 12 (1965): 9-13. (15, 27)

LaConte, R. T. "What Research Says to the Teacher, Homework as a Learning Experience." Microfiche. (ED 217 022) 1981: 1-32. (12, 27, 31)

Langdon, G. and I. Stout. "What Parents Think of Homework." National Education Association Journal 52 (1963): 9-11. (1, 22. 30)

Lee, J. F. and K. W. Pruitt. "Homework Assignments: Classroom Games or Teaching Tools?" Clearing House 53 (1979): 31-35. (13, 27, 33)

Maertens, N. and J. Johnston. "Effects of Arithmetic Homework Upon the Attitude and Achievement of Fifth and Sixth Grade Pupils." School Science and Mathematics 72 (1972): 117-126. (21, 30)

National Commissions on Excellence in Education. "A Nation At Risk: The Imperative for Educational Reform." Washington, D.C.: United States Department of Education, April (1983). (1, 10, 25, 32)

National Education Association. "Homework. What Research Says to the Teacher." No. 36. Microfiche. (ED 118 559) 1975: 1-34. (11, 26)

Natriello, Gary and E. L. McDill. "Performance Standards. Student Effect on Homework, and Academic Achievement." Sociology of Education 59 (January 1986): 18-31. (23, 31)

Patton, J. E., T. A. Stinard, and D. K. Routh. "Where Do Children Study?" Journal of Educational Research 76 (1983): 280-286. (23, 31, 33)

Paschal, R. A., T. Weinstein, and H. Walberg. "The Effect of Homework on Learning: A Quantitative Synthesis." The Journal of Educational Research 78.2 (1984): 97-102. (3, 19, 26, 27, 29, 30)

Peterson, J. C. "Four Organizational Patterns for Assigning Mathematics Homework." School Science and Mathematics 71 (1971): 592-596. (15)

Polachek, S. W., H. J. Kniesner, and H. J. Harwood. "Educational Production Functions." Journal of Educational Statistics 3.3 (1978): 209-231. (19, 29)

Rickards, John P. "Homework." Encyclopedia of Educational Research 5th ed., The MacMillan Company: New York, 2 (1982): 831-834. (3, 6, 24)

Singh, Jane M. "An Investigation of the Effect of Individualized Enrichment Homework Upon the Academic Achievement of Children in the Fourth, and Sixth Grade." Microfiche. (ED 042 585) 1970: 1-5. (15)

Stanley, J. C. "Manipulate Important Educational Variables." Educational Psychologist 19 (1980): 164-71. (19, 29)

Strang, R. S. "Guided Study on Homework. What Research Says to the Teacher." No. 8 Microfiche. (ED 007 901) 1968: 1-30. (10, 24)

Walberg, H. J. "Families as Partners in Educational Productivity." Phi Delta Kappan 65.6 (1984): 397-400. (21, 30, 33)

---. "Improving the Productivity of American's Schools." Educational Leadership 41 (May 1984): 19-36. (17, 32, 28, 32)

Walberg, H. J., R. A. Paschal, and T. Weinstein. "Homework's Powerful Effects on Learning." Educational Leadership 42.7 (1985): 76-79. (1, 3, 14, 17, 19, 29)

Ward, B. and Others. "The Relationship of Students' Academic Achievement to Television Watching, Leisure Time Reading and Homework." Microfiche. (ED 236 249) 1983: 1-51. (18, 29)

Wildman, P. R. "Homework Pressures." Peabody Journal of Education 45 (January 1968): 202-204. (9, 25)

STUDENT QUALIFICATIONS

NAME: Georgia M. Vratanina
50590 Tecumseh Dr.
Granger, IN 46530
(219) 277-1270

EDUCATION:

Indiana University at South Bend
South Bend, IN
Pursuing a Master of Arts in Elementary Education

Art Institute of Chicago, IL
Bachelor of Fine Arts Degree
General Elementary Credits
Chicago State University and Indiana University-South Bend

EXPERIENCE:

Penn-Harris-Madison School Corporation
Osceola, IN
1984 to present
Taught second grade at Mary Frank School. Currently teaching third grade at Harris Elementary School:
second grade-1 year third grade 3 years.

Studebaker Elementary School
South Bend, IN
Taught third grade for 2 years-1961-64

Council Rock School District
Langhorne, PA
Title I teacher - Grade 1-8. 1976-78

QUALIFICATIONS:

In the past few year, while teaching third grade, I have experienced pressure from parents requesting more and more homework. These parents have many concerns over our school's homework policy. Although I spend a great deal of time planning my daily classroom objectives and activities, I feel that my homework assignments have not been as organized or structured as they should be. I want to improve in this area and plan a more feasible homework policy. Through this research, I can get a better understanding of the effects of homework on students' learning, and determine whether certain types of homework can raise students' achievement.